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EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT	PAPER NUMBER
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2629

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/051,359	Applicant(s) ASANO ET AL.	
	Examiner Srilakshmi K. Kumar	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following is in response to the amendment, filed on November 2, 2007. Claims 1-8 are pending. Claims 1 and 6 have been amended. Claim 8 has been newly added.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al (US 6,351,327 B1) in view of Brody (US 4,982,273) and further in view of Matsuo et al (US 5,414,547).

As to independent claim 1, Kimura et al disclose an organic electroluminescent display (col. 19, line 66-col. 20, line 7, and Fig. 1, item 100) having active matrix circuitry (col. 20, lines 9-25), the organic electroluminescence display comprising; a substrate (Fig. 1, item 1); a device layer provided on the substrate (col. 20, lines 20-25), the device layer comprising a plurality of luminescent devices (Fig. 1, item 224) defining pixel units (Fig. 1, item 10) arrayed in a matrix (Fig. 1, col. 20, lines 26-40), each luminescent device having an emitting area that emits independently of the emitting areas of the other luminescent devices (col. 1, lines 39-44, where in Fig. 1, item 224 shows the individual luminescent device per pixel independent from other pixel emitting areas); a circuitry layer provided between the substrate (Fig. 1) and the device layer, the circuitry layer comprising pixel circuits for driving the respective luminescent devices (col. 1, lines 24-58), the pixel circuits defining the pixel units (Fig. 1, item 10, col. 20, lines 26-

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40); Kimura et al teach adjacent upper electrodes in col. 20, lines 26-40. Kimura et al do not disclose contacts, electrically connecting each of the luminescent devices with a corresponding pixel circuit. Brody discloses contacts (Figs 4b and 4c, item 27, col. 7, line 54-col. 8, lines 18), where in Fig. 4b, the contacts (27) are shown to be at the edges of the emitting areas. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the contacts of Brody into Kimura et al as the contacts for the row or column of the display as disclosed by Brody in col. 2, lines 65-col. 3, lines 20 improve image quality. Kimura et al as modified by Brody do not disclose wherein the contact is provided between adjacent emitting areas of the luminescent devices. Matsuo et al disclose a display device comprising contacts (Fig. 24, item 207) wherein the contact is provided between adjacent emitting areas (201bb, 201cb, etc. being the pixel emitting areas, and the contacts being provided in between the pixel areas). Further the combination of Kimura et al, Brody and Matsuo et al teach where the contacts (taught by Brody in Fig. 4b, item 27) between adjacent upper pixel electrodes (taught by Kimura col. 20, lines 26-40) that each cover a respective one of the emitting area (outside the emitting area, but covering the emitting areas taught by Matsuo et al, Fig. 24, item 207). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the contacts between adjacent emitting as taught by Matsuo et al into Kimura et al as modified by Brody as the having the contacts provided between the adjacent emitting areas increases the emitting/display area (Matsuo et al, col. 2, lines 45-68).

As to independent claim 6, limitations of claim 1, and further comprising, Kimura et al disclose an organic layer including a luminescent layer and lying between the upper electrode and the lower electrode (col. 20, lines 26-40). Kimura et al do not disclose wherein each lower

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electrode has a contact electrically connecting the corresponding luminescent device with the corresponding pixel circuit, and wherein the upper electrode is not provided over the contact. Brody discloses wherein each lower electrode has a contact electrically connecting the corresponding luminescent device with the corresponding pixel circuit (Figs 4b and 4c, item 27, col. 7, line 54-col. 8, lines 18), and wherein the upper electrode is not provided over the contact, as in Fig. 4b, the contacts (27) are shown to be at the edges of the emitting areas. It would have been obvious to one of ordinary skill in the art to include the contacts of Brody into Kimura et al as the contacts for the row or column of the display as disclosed by Brody in col. 2, lines 65-col. 3, lines 20 improve image quality. Kimura et al as modified by Brody do not disclose wherein the contact is provided between adjacent emitting areas of the luminescent devices. Matsuo et al disclose a display device comprising contacts (Fig. 24, item 207) wherein the contact is provided between adjacent emitting areas (201bb, 201cb, etc. being the pixel emitting areas, and the contacts being provided in between the pixel areas). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the contacts between adjacent emitting as taught by Matsuo et al into Kimura et al as modified by Brody as the having the contacts provided between the adjacent emitting areas increases the emitting/display area (Matsuo et al, col. 2, lines 45-68).

As to independent claim 8, limitations of claims 1 and 6, and further comprising, Kimura does not explicitly state color subpixels. Brody teaches color subpixels in Fig. 15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include RGB subpixel units as taught by Brody into Kimura et al as a color display would be advantageous for increased desirability by the user to display color images.

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As to dependent claim 2, limitations of claim 1, and further comprising, Brody discloses a flat screen color display comprising an active matrix and wherein the contacts are arrayed in a single dimension for each row or column in the matrix in Figs. 4a and 7 and in col. 7, line 54-col. 8, lines 18.

As to dependent claim 3, limitations of claim 2, and further comprising, Brody discloses a flat screen color display comprising an active matrix and wherein the contacts for the pixel units belonging to two adjacent rows or columns in the matrix are arrayed in a single dimension between the two adjacent rows or columns in Figs. 4a and 7 and in col. 7, line 54-col. 8, lines 18.

As to dependent claim 4, limitations of claim 1, and further comprising, Kimura et al disclose wherein the luminescent devices are organic electroluminescent devices (col. 20, lines 29-30), each comprising a first electrode, a second electrode and an organic layer including an luminescent layer and lying between the first electrode and the second electrode (col. 20, lines 41-62).

As to dependent claims 5 and 7, limitations of claims 1 and 6, and further comprising, Kimura et al disclose wherein the pixel circuits (Fig. 1, item 10) each comprise a thin film transistor (Fig. 1, item 223, col. 20, lines 26-40).

Response to Arguments

3. Applicant's arguments filed November 2, 2007 have been fully considered but they are not persuasive.

Applicant argues where the prior art does not teach a contact that is provided between adjacent emitting areas of luminescent devices and between adjacent upper pixel electrodes that each cover a respective one of the emitting areas. Examiner, respectfully, disagrees. Kimura

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teaches upper electrodes in col. 20, lines 26-40. Brody teaches the electrical contacts. Matsuo teaches where the contacts are outside of the emitting area (Fig. 24, item 207), but adjacent the pixel emitting areas. The combination of Kimura, Brody and Matsuo teaches the claimed limitation of the contacts electrically connecting each of the luminescent devices with a corresponding pixel circuit, wherein the contacts are provided between adjacent emitting areas of the luminescent devices and between adjacent upper pixel electrodes that each cover a respective one of the emitting area. It would have been obvious to one of ordinary skill in the to include Brody contacts into Kimura as the contacts for the row or column of the display as disclosed by Brody in col. 2, lines 65-col. 3, lines 20 improve image quality. It would have been obvious to one of ordinary skill in the art to include the placement of contacts as disclosed by Matsuo into Kimura et al as modified by Brody as the having the contacts provided between the adjacent emitting areas increases the emitting/display area (Matsuo et al, col. 2, lines 45-68).

Applicant argues where Matsuo teaches an LCD display as opposed an OLED, thus is non-analogous art. While examiner agrees that Matsuo teaches an LCD, the display of Matsuo teaches where it is possible to provide contacts outside of the emitting area in order to increase the emitting area of the display. Thus the combination of Matsuo with Kimura as modified by Brody is proper.

Therefore the combination of Kimura, Brody and Matsuo teach the limitations set forth in the instant application. The rejection is maintained and made FINAL.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Srilakshmi K Kumar
Examiner
Art Unit 2629

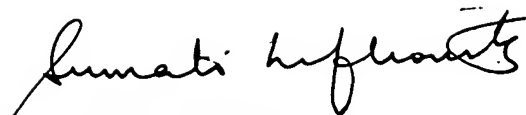
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SKK

January 14, 2008

A handwritten signature in black ink, appearing to read "Sumati Lefkowitz", with a stylized flourish at the end.

SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER